Practitioner's Docket No. MWH-0001US *PATENT*

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Chew, Anne; Denton, R. Rex; Bieglecki, Karyn; Nandabalan, Krishnan; and Stephens, Joel Claiborne

Title: Haplotypes of the TNFRSF11B Gene

Application No.: To be assigned
Filed: 9 January 2002
For: Haplotypes of the TNFRSF11B Gene

Group No.: 1632
Examiner: Joseph Woitach

Assistant Commissioner for Patents
Patent and Trademark Office
Washington, D.C. 20231

STATEMENT ACCOMPANYING "SEQUENCE LISTING"
(37 C.F.R. 1.821 (f))

The undersigned hereby states upon information and belief that the information recorded in the computer readable form of the sequence listing is identical to the written (paper) sequence listing submitted with the application.

9-January-2002
Date

Respectfully submitted,

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POLYMORPHISMS IN THE TNFRSF11B GENE

```
ACAGCGAACC CTAGAGCAAA GTGCCAAACT TCTGTCGATA GCTTGAGGCT
AGTGGAAAGA CCTCGAGGAG GCTACTCCAG AAGTTCAGCG CGTAGGAAGC      100
TCCGATACCA ATAGCCCTTT GATGATGGTG GGGTTGGTGA AGGGAACAGT
GCTCCGCAAG GTTATCCCTG CCCCAGGCAG TCCAATTTTC ACTCTGCAGA      200
TTCTCTCTGG CTCTAACTAC CCCAGATAAC AAGGAGTGAA TGCAGAATAG
CACGGGCTTT AGGGCCAATC AGACATTAGT TAGAAAAATT CCTACTACAT      300
GGTTTATGTA AACTTGAAGA TGAATGATTG CGAACTCCCC GAAAAGGGCT
CAGACAATGC CATGCATAAA GAGGGGCCCT GTAATTTGAG GTTTCAGAAC      400
CCGAAGTGAA GGGGTCAGGC AGCCGGGTAC GGCGGAAACT CACAGCTTTC
GCCCAGCGAG AGGACAAAGG TCTGGGACAC ACTCCAACTG CGTCCGGATC      500
TTGGCTGGAT CGGACTCTCA GGGTGGAGGA GACACAAGCA CAGCAGCTGC
   T
CCAGCGTGTG CCCAGCCCTC CCACCGCTGG TCCCGGCTGC CAGGAGGCTG      600
GCCGCTGGCG GGAAGGGGCC GGGAAACCTC AGAGCCCCGC GGAGACAGCA
GCCGCCTTGT TCCTCAGCCC GGTGGCTTTT TTTTCCCCTG CTCTCCCAGG      700
GGACAGACAC CACCGCCCCA CCCCTCACGC CCCACCTCCC TGGGGGATCC
                  T                                  T
TTTCCGCCCC AGCCCTGAAA GCGTTAATCC TGGAGCTTTC TGCACACCCC      800
                                C
CCGACCGCTC CCGCCCAAGC TTCCTAAAAA AGAAAGGTGC AAAGTTTGGT
CCAGGATAGA AAAATGACTG ATCAAAGGCA GGCGATACTT CCTGTTGCCG      900
GGACGCTATA TATAACGTGA TGAGCGCACG GGCTGCGGAG ACGCACCGGA
GCGCTCGCCC AGCCGCCGCC TCCAAGCCCC TGAGGTTTCC GGGGACCACA     1000
ATGAACAAGT TGCTGTGCTG CGCGCTCGTG GTAAGTCCCT GGGCCAGCCG
       C                                             T
      [exon 1: 1001..
               ..1030]
ACGGGTGCCC GGCGCCTGGG GAGGCTGCTG CCACCTGGTC TCCCAACCTC     1100
CCAGCGGACC GGCGGGGAGA AGGCTCCACT CGCTCCCTCC CAGGAGAGGC
                    A
TTGGGGTTAG GCTGGAGCAG GAAACCGCTT TCAAGTTATG CCATGCTTCC     1200
CCTAGGGTGT CCTTTTACGC TGCAAAGTTC CTGCTGACTT TATGGAAGAC
                  A
AGCAAGAGAG AGACAGACAG CGAGAGAGAG GGAGAGAGAG AGAGAGAGAA     1300
ACTTGTTTGA AAGTTTTAGT CATTAACCTT CTGTCTTCAT CTCAGAATAT
TAACGCCCTC ATGTAGTCCA TACTATCTTT GCTTAATGAA CTTGAACTTT     1400
TATTATTAGT GGCAAAGAAG TGGTCCCTTA GATTCAGAGT AAGTTGGAAG
AAGACGTTAG TCTTCTTAAA ACCATTATAA TTAGAATATG ACATGATAGA     1500
NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN
CAGGACTTTG AGTCAAATGA TACTGTTGCA CATAAGAACA AACCTATTTT     1600
CATGCTAAGA TGATGCCACT GTGTTCCTTT CTCCTTCTAG TTTCTGGACA
      [exon 2: 1641..
TCTCCATTAA GTGGACCACC CAGGAAACGT TTCCTCCAAA GTACCTTCAT     1700
TATGACGAAG AAACCTCTCA TCAGCTGTTG TGTGACAAAT GTCCTCCTGG
TACCTACCTA AAACAACACT GTACAGCAAA GTGGAAGACC GTGTGCGCCC     1800
CTTGCCCTGA CCACTACTAC ACAGACAGCT GGCACACCAG TGACGAGTGT
CTATACTGCA GCCCCGTGTG CAAGGAGCTG CAGTACGTCA AGCAGGAGTG     1900
CAATCGCACC CACAACCGCG TGTGCGAATG CAAGGAAGGG CGCTACCTTG
AGATAGAGTT CTGCTTGAAA CATAGGAGCT GCCCTCCTGG ATTTGGAGTG     2000
GTGCAAGCTG GTACGTGTCA ATGTGCAGCA AAATTAATTA GGATCATGCA
               T
                  ..2010]
```

FIGURE 1A

AAGTCAGATA GTTGTGACAG TTTAGGAGAA CACTTTTGTT CTGATGACAT 2100
TATAGGATAG CAAATTGCAA AGGTAATGAA ACCTGCCAGG TAGGTACTAT
GTGTCTGGAG TGCTTCCAAA GGACCATTGC TCAGAGGAAT ACTTTGCCAC 2200
C
TACAGGGCAA TTTAATGACA AATCTCAAAT GCAGCAAATT ATTCTCTCAT
GAGATGCATG ATGGTTTTTT TTTTTTTTTT TAAAGAAACA AACTCAAGTT 2300
GCACTATTGA TAGTTGATCT ATACCTCTAT ATTTCACTTC AGCATGGACA
CCTTCAAACT GCAGCACTTT TTGACAAACA TCAGAAATGT TAATTTATAC 2400
CAAGAGAGTA ATTATGCTCA TATTAATGAG ACTCTGGAGT GCTAACAATA
AGCAGTTATA ATTAATTATG TAAAAAATGA GAATGGTGAG GGGAATTGCA 2500
TTTCATTATT AAAAACAAGG CTAGTTCTTC CTTTAGCATG GGAGCTGAGT
GTTTGGGAGG GTAAGGACTA TAGCAGAATC TCTTCAATGA GCTTATTCTT 2600
TATCTTAGAC AAAACAGATT GTCAAGCCAA GAGCAAGCAC TTGCCTATAA
ACCAAGTGCT TTCTCTTTTG CATTTTGAAC AGCATTGGTC AGGGCTCATG 2700
TGTATTGAAT CTTTTAAACC AGTAACCCAC GTTTTTTTTC TGCCACATTT
GCGAAGCTTC AGTGCAGCCT ATAACTTTTC ATAGCTTGAG AAAATTAAGA 2800
GTATCCACTT ACTTAGATGG AAGAAGTAAT CAGTATAGAT TCTGATGACT
CAGTTTGAAG CAGTGTTTCT CAACTGAAGC CCTGCTGATA TTTTAAGAAA 2900
TATCTGGATT CCTAGGCTGG ACTCCTTTTT GTGGGCAGCT GTCCTGCGCA
TTGTAGAATT TTGGCAGCAC CCCTGGACTC TAGCCACTAG ATACCAATAG 3000
CAGTCCTTCC CCCATGTGAC AGCCAAAAAT GTCTTCAGAC ACTGTCAAAT
GTCGCCAGGT GGCAAAATCA CTCCTGGTTG AGAACAGGGT CATCAATGCT 3100
AAGTATCTGT AACTATTTTA ACTCTCAAAA CTTGTGATAT ACAAAGTCTA
AATTATTAGA CGACCAATAC TTTAGGTTTA AAGGCATACA AATGAAACAT 3200
TCAAAAATCA AAATCTATTC TGTTTCTCAA ATAGTGAATC TTATAAAATT
AATCACAGAA GATGCAAATT GCATCAGAGT CCCTTAAAAT TCCTCTTCGT 3300
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GTACTTTGAG ACTCAAAAGC TAAGCTAAGT TGTGTGTGTG TCAGGGTGCG 3400
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GAAAATCTGT TTGTAGAATG AAGCAAGCAG GCAGCCAGAA GACTCAGAAC 3600
AAAAGTACAC ATTTTACTCT GTGTACACTG GCAGCACAGT GGGATTTATT
TACCTCTCCC TCCCTAAAAA CCCACACAGC GGTTCCTCTT GGGAAATAAG 3700
AGGTTTCCAG CCCAAAGAGA AGGAAAGACT ATGTGGTGTT ACTCTAAAAA
GTATTTAATA ACCGTTTTGT TGTTGCTGTT GCTGTTTTGA AATCAGATTG 3800
TCTCCTCTCC ATATTTTATT TACTTCATTC TGTTAATTCC TGTGGAATTA
CTTAGAGCAA GCATGGTGAA TTCTCAACTG TAAAGCCAAA TTTCTCCATC 3900
ATTATAATTT CACATTTTGC CTGGCAGGTT ATAATTTTTA TATTTCCACT
GATAGTAATA AGGTAAAATC ATTACTTAGA TGGATAGATC TTTTTCATAA 4000
AAAGTACCAT CAGTTATAGA GGGAAGTCAT GTTCATGTTC AGGAAGGTCA
TTAGATAAAG CTTCTGAATA TATTATGAAA CATTAGTTCT GTCATTCTTA 4100
GATTCTTTTT GTTAAATAAC TTTAAAAGCT AACTTACCTA AAAGAAATAT
CTGACACATA TGAACTTCTC ATTAGGATGC AGGAGAAGAC CCAAGCCACA 4200
GATATGTATC TGAAGAATGA ACAAGATTCT TAGGCCCGGC ACGGTGGCTC
ACATCTGTAA TCTCAAGAGT TTGAGAGGTC AAGGCGGGCA GATCACCTGA 4300
GGTCAGGAGT TCAAGACCAG CCTGGCCAAC ATGATGAAAC CCTGCCTCTA
CTAAAAATAC AAAAATTAGC AGGGCATGGT GGTGCATGCC TGCAACCCTA 4400
GCTACTCAGG AGGCTGAGAC AGGAGAATCT CTTGAACCCT CGAGGCGGAG
GTTGTGGTGA GCTGAGATCC CTCTACTGCA CTCCAGCCTG GGTGACAGAG 4500
ATGAGACTCC GTCCCTGCCG CCGCCCCCGC CTTCCCCCCC AAAAAGATTC
TTCTTCATGC AGAACATACG GCAGTCAACA AAGGGAGACC TGGGTCCAGG 4600
TGTCCAAGTC ACTTATTTCG AGTAAATTAG CAATGAAAGA ATGCCATGGA
ATCCCTGCCC AAATACCTCT GCTTATGATA TTGTAGAATT TGATATAGAG 4700

FIGURE 1B

```
TTGTATCCCA TTTAAGGAGT AGGATGTAGT AGGAAAGTAC TAAAAACAAA
CACACAAACA GAAAACCCTC TTTGCTTTGT AAGGTGGTTC CTAAGATAAT      4800
GTCAGTGCAA TGCTGGAAAT AATATTTAAT ATGTGAAGGT TTTAGGCTGT
GTTTTCCCCT CCTGTTCTTT TTTTCTGCCA GCCCTTTGTC ATTTTTGCAG      4900
GTCAATGAAT CATGTAGAAA GAGACAGGAG ATGAAACTAG AACCAGTCCA
TTTTGCCCCT TTTTTTATTT TCTGGTTTTG GTAAAAGATA CAATGAGGTA      5000
GGAGGTTGAG ATTTATAAAT GAAGTTTAAT AAGTTTCTGT AGCTTTGATT
TTTCTCTTTC ATATTTGTTA TCTTGCATAA GCCAGAATTG GCCTGTAAAA      5100
TCTACATATG GATATTGAAG TCTAAATCTG TTCAACTAGC TTACACTAGA
TGGAGATATT TTCATATTCA GATACACTGG AATGTATGAT CTAGCCATGC      5200
GTAATATAGT CAAGTGTTTG AAGGTATTTA TTTTTAATAG CGTCTTTAGT
TGTGGACTGG TTCAAGTTTT TCTGCCAATG ATTTCTTCAA ATTTATCAAA      5300
TATTTTTCCA TCATGAAGTA AAATGCCCTT GCAGTCACCC TTCCTGAAGT
TTGAACGACT CTGCTGTTTT AAACAGTTTA AGCAAATGGT ATATCATCTT      5400
CCGTTTACTA TGTAGCTTAA CTGCAGGCTT ACGCTTTTGA GTCAGCGGCC
AACTTTATTG CCACCTTCAA AAGTTTATTA TAATGTTGTA AATTTTTACT      5500
TCTCAAGGTT AGCATACTTA GGAGTTGCTT CACAATTAGG ATTCAGGAAA
GAAAGAACTT CAGTAGGAAC TGATTGGAAT TTAATGATGC AGCATTCAAT      5600
GGGTACTAAT TTCAAAGAAT GATATTACAG CAGACACACA GCAGTTATCT
TGATTTTCTA GGAATAATTG TATGAAGAAT ATGGCTGACA ACACGGCCTT      5700
ACTGCCACTC AGCGGAGGCT GGACTAATGA ACACCCTACC CTTCTTTCCT
TTCCTCTCAC ATTTCATGAG CGTTTTGTAG GTAACGAGAA AATTGACTTG      5800
CATTTGCATT ACAAGGAGGA GAAACTGGCA AAGGGGATGA TGGTGGAAGT
TTTGTTCTGT CTAATGAAGT GAAAAATGAA AATGCTAGAG TTTTGTGCAA      5900
CATAATAGTA GCAGTAAAAA CCAAGTGAAA AGTCTTTCCA AAACTGTGTT
     C
AAGAGGGCAT CTGCTGGGAA ACGATTTGAG GAGAAGGTAC TAAATTGCTT      6000
GGTATTTTCC GTAGGAACCC CAGAGCGAAA TACAGTTTGC AAAAGATGTC
          T
      [exon 3: 6015..
CAGATGGGTT CTTCTCAAAT GAGACGTCAT CTAAAGCACC CTGTAGAAAA      6100
CACACAAATT GCAGTGTCTT TGGTCTCCTG CTAACTCAGA AAGGAAATGC
AACACACGAC AACATATGTT CCGGAAACAG TGAATCAACT CAAAAATGTG      6200
GAATAGGTAA TTACATTCCA AAATACGTCT TTGTACGATT TTGTAGTATC
                  ..6206]
ATCTCTCTCT CTGAGTTGAA CACAAGGCCT CCAGCCACAT TCTTGGTCAA      6300
ACTTACATTT TCCCTTTCTT GAATCTTAAC CAGCTAAGGC TACTCTCGAT
GCATTACTGC TAAAGCTACC ACTCAGAATC TCTCAAAAAC TCATCTTCTC      6400
ACAGATAACA CCTCAAAGCT TGATTTTCTC TCCTTTCACA CTGAAATCAA
ATCTTGCCCA TAGGCAAAGG GCAGTGTCAA GTTTGCCACT GAGATGAAAT      6500
TAGGAGAGTC CAAACTGTAG AATTCACGTT GTGTGTTATT ACTTTCACGA
ATGTCTGTAT TATTAACTAA AGTATATATT GGCAACTAAG AAGCAAAGTG      6600
ATATAAACAT GATGACAAAT TAGGCCAGGC ATGGTGGCTT ACTCCTATAA
TCCCAACATT TTGGGGGGCC AAGGTAGGCA GATCACTTGA GGTCAGGATT      6700
TCAAGACCAG CCTGACCAAC ATGGTGAAAC CTTGTCTCTA CTAAAAATAC
AAAAATTAGC TGGGCATGGT AGCAGGCACT TCTAGTACCA GCTACTCAGG      6800
GCTGAGGCAG GAGAATCGCT TGAACCCAGG AGATGGAGGT TGCAGTGAGC
TGAGATTGTA CCACTGCACT CCAGTCTGGG CAACAGAGCA AGATTTCATC      6900
ACACACACAC ACACACACAC ACACACACAC ATTAGAAATG TGTACTTGGC
TTTGTTACCT ATGGTATTAG TGCATCTATT GCATGGAACT TCCAAGCTAC      7000
TCTGGTTGTG TTAAGCTCTT CATTGGGTAC AGGTCACTAG TATTAAGTTC
AGGTTATTCG GATGCATTCC ACGGTAGTGA TGACAATTCA TCAGGCTAGT      7100
GTGTGTGTTC ACCTTGTCAC TCCCACCACT AGACTAATCT CAGACCTTCA
CTCAAAGACA CATTACACTA AAGATGATTT GCTTTTTTGT GTTTAATCAA      7200
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FIGURE 1C

GCAATGGTAT AAACCAGCTT GACTCTCCCC AAACAGTTTT TCGTACTACA
AAGAAGTTTA TGAAGCAGAG AAATGTGAAT TGATATATAT ATGAGATTCT 7300
AACCCAGTTC CAGCATTGTT TCATTGTGTA ATTGAAATCA TAGACAAGCC
ATTTTAGCCT TTGCTTTCTT ATCTAAAAAA AAAAAAAAAA AAATGAAGGA 7400
AGGGGTATTA AAAGGAGTGA TCAAATTTTA ACATTCTCTT TAATTAATTC
ATTTTTAATT TTACTTTTTT TCATTTATTG TGCACTTACT ATGTGGTACT 7500
GTGCTATAGA GGCTTTAACA TTTATAAAAA CACTGTGAAA GTTGCTTCAG
ATGAATATAG GTAGTAGAAC GGCAGAACTA GTATTCAAAG CCAGGTCTGA 7600
TGAATCCAAA AACAAACACC CATTACTCCC ATTTTCTGGG ACATACTTAC
TCTACCCAGA TGCTCTGGGC TTTGTAATGC CTATGTAAAT AACATAGTTT 7700
TATGTTTGGT TATTTTCCTA TGTAATGTCT ACTTATATAT CTGTATCTAT
CTCTTGCTTT GTTTCCAAAG GTAAACTATG TGTCTAAATG TGGGCAAAAA 7800
ATAACACACT ATTCCAAATT ACTGTTCAAA TTCCTTTAAG TCAGTGATAA
TTATTTGTTT TGACATTAAT CATGAAGTTC CCTGTGGGTA CTAGGTAAAC 7900
CTTTAATAGA ATGTTAATGT TTGTATTCAT TATAAGAATT TTTGGCTGTT
ACTTATTTAC AACAATATTT CACTCTAATT AGACATTTAC TAAACTTTCT 8000
CTTGAAAACA ATGCCCAAAA AAGAACATTA GAAGACACGT AAGCTCAGTT
GGTCTCTGCC ACTAAGACCA GCCAACAGAA GCTTGATTTT ATTCAAACTT 8100
TGCATTTTAG CATATTTTAT CTTGGAAAAT TCAATTGTGT TGGTTTTTTG
A
TTTTTGTTTG TATTGAATAG ACTCTCAGAA ATCCAATTGT TGAGTAAATC 8200
TTCTGGGTTT TCTAACCTTT CTTTAGATGT TACCCTGTGT GAGGAGGCAT
[exon 4: 8227..
TCTTCAGGTT TGCTGTTCCT ACAAAGTTTA CGCCTAACTG GCTTAGTGTC 8300
TTGGTAGACA ATTTGCCTGG CACCAAAGTA AACGCAGAGA GTGTAGAGAG
T
GATAAAACGG CAACACAGCT CACAAGAACA GACTTTCCAG CTGCTGAAGT 8400
G
TATGGAAACA TCAAAACAAA GACCAAGATA TAGTCAAGAA GATCATCCAA
G
GGTATGATAA TCTAAAATAA AAAGATCAAT CAGAAATCAA AGACACCTAT 8500
C
..8451]
TTATCATAAA CCAGGAACAA GACTGCATGT ATGTTTAGTT GTGTGGATCT
TGTTTCCCTG TTGGAATCAT TGTTGGACTG AAAAAGTTTC CACCTGATAA 8600
TGTAGATGTG ATTCCACAAA CAGTTATACA AGGTTTTGTT CTCACCCCTG
CTCCCCAGTT TCCTTGTAAA GTATGTTGAA CACTCTAAGA GAAGAGAAAT 8700
GCATTTGAAG GCAGGGCTGT ATCTCAGGGA GTCGCTTCCA GATCCCTTAA
CGCTTCTGTA AGCAGCCCCT CTAGACCACC AAGGAGAAGC TCTATAACCA 8800
CTTTGTATCT TACATTGCAC CTCTACCAAG AAGCTCTGTT GTATTTACTT
GGTAATTCTC TCCAGGTAGG CTTTTCGTAG CTTACAAATA TGTTCTTATT 8900
AATCCTCATG ATATGGCCTG CATTAAAATT ATTTTAATGG CATATGTTAT
GAGAATTAAT GAGATAAAAT CTGAAAAGTG TTTGAGCCTC TTGTAGGAAA 9000
AAGCTAGTTA CAGCAAAATG TTCTCACATC TTATAAGTTT ATATAAAGAT
TCTCCTTTAG AAATGGTGTG AGAGAGAAAC AGAGAGAGAT AGGGAGAGAA 9100
GTGTGAAAGA ATCTGAAGAA AAGGAGTTTC ATCCAGTGTG GACTGTAAGC
TTTACGACAC ATGATGGAAA GAGTTCTGAC TTCAGTAAGC ATTGGGAGGA 9200
CATGCTAGAA GAAAAAGGAA GAAGAGTTTC CATAATGCAG ACAGGGTCAG
TGAGAAATTC ATTCAGGTCC TCACCAGTAG TTAAATGACT GTATAGTCTT 9300
GCACTACCCT AAAAAACTTC AAGTATCTGA AACCGGGGCA ACAGATTTTA
GGAGACCAAC GTCTTTGAGA GCTGATTGCT TTTGCTTATG CAAAGAGTAA 9400
ACTTTTATGT TTTGAGCAAA CCAAAAGTAT TCTTTGAACG TATAATTAGC
CCTGAAGCCG AAAGAAAAGA GAAAATCAGA GACCGTTAGA ATTGGAAGCA 9500
ACCAAATTCC CTATTTTATA AATGAGGACA TTTTAACCCA GAAAGATGAA

FIGURE 1D

```
CCGATTTGGC TTAGGGCTCA CAGATACTAA GTGACTCATG TCATTAATAG   9600
AAATGTTAGT TCCTCCCTCT TAGGTTTGTA CCCTAGCTTA TTACTGAAAT
ATTCTCTAGG CTGTGTGTCT CCTTTAGTTC CTCGACCTCA TGTCTTTGAG   9700
TTTTCAGATA TCCTCCTCAT GGAGGTAGTC CTCTGGTGCT ATGTGTATTC
TTTAAAGGCT AGTTACGGCA ATTAACTTAT CAACTAGCGC CTACTAATGA   9800
AACTTTGTAT TACAAAGTAG CTAACTTGAA TACTTTCCTT TTTTTCTGAA
ATGTTATGGT GGTAATTTCT CAAACTTTTT CTTAGAAAAC TGAGAGTGAT   9900
GTGTCTTATT TTCTACTGTT AATTTTCAAA ATTAGGAGCT TCTTCCAAAG
TTTTGTTGGA TGCCAAAAAT ATATAGCATA TTATCTTATT ATAACAAAAA   10000
ATATTTATCT CAGTTCTTAG AAATAAATGG TGTCACTTAA CTCCCTCTCA
AAAGAAAAGG TTATCATTGA AATATAATTA TGAAATTCTG CAAGAACCTT   10100
TTGCCTCACG CTTGTTTTAT GATGGCATTG GATGAATATA AATGATGTGA
ACACTTATCT GGGCTTTTGC TTTATGCAGA TATTGACCTC TGTGAAAACA   10200
     [exon 5: 10180..
GCGTGCAGCG GCACATTGGA CATGCTAACC TCACCTTCGA GCAGCTTCGT
  A
AGCTTGATGG AAAGCTTACC GGGAAAGAAA GTGGGAGCAG AAGACATTGA   10300
AAAAACAATA AAGGCATGCA AACCCAGTGA CCAGATCCTG AAGCTGCTCA
GTTTGTGGCG AATAAAAAAT GGCGACCAAG ACACCTTGAA GGGCCTAATG   10400
CACGCACTAA AGCACTCAAA GACGTACCAC TTTCCCAAAA CTGTCACTCA
GAGTCTAAAG AAGACCATCA GGTTCCTTCA CAGCTTCACA ATGTACAAAT   10500
TGTATCAGAA GTTATTTTTA GAAATGATAG GTAACCAGGT CCAATCAGTA
             C
AAAATAAGCT GCTTATAACT GGAAATGGCC ATTGAGCTGT TTCCTCACAA   10600
                   ..10568]
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TCAGTGATAT CTTTCTCATT ACCAGTGACT AATTTTGCCA CAGGGTACTA   10700
AAAGAAACTA TGATGTGGAG AAAGGACTAA CATCTCCTCC AATAAACCCC
AAATGGTTAA TCCAACTGTC AGATCTGGAT CGTTATCTAC TGACTATATT   10800
TTCCCTTATT ACTGCTTGCA GTAATTCAAC TGGAAATTAA AAAAAAAAAA
CTAGACTCCA CTGGGCCTTA CTAAATATGG GAATGTCTAA CTTAAATAGC   10900
TTTGGGATTC CAGCTATGCT AGAGGCTTTT ATTAGAAAGC CATATTTTTT
TCTGTAAAAG TTACTAATAT ATCTGTAACA CTATTACAGT ATTGCTATTT   11000
ATATTCATTC AGATATAAGA TTTGGACATA TTATCATCCT ATAAAGAAAC
GGTATGACTT AATTTTAGAA AGAAAATTAT ATTCTGTTTA TTATGACAAA   11100
TGAAAGAGAA AATATATATT TTTAATGGAA AGTTTGTAGC ATTTTTCTAA
TAGGTACTGC CATATTTTTC TGTGTGGAGT ATTTTTATAA TTTTATCTGT   11200
ATAAGCTGTA ATATCATTTT ATAGAAAATG CATTATTTAG TCAATTGTTT
AATGTTGGAA AACATATGAA ATATAAATTA TCTGAATATT AGATGCTCTG   11300
AGAAATTGAA TGTACCTTAT TTAAAAGATT TTATGGTTTT ATAACTATAT
AAATGACATT ATTAAAGTTT TCAAATTATT TTTTATTGCT TTCTCTGTTG   11400
CTTTTATT                                                 11408
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FIGURE 1E

POLYMORPHISMS IN THE CODING SEQUENCE OF TNFRSF11B

```
ATGAACAAGT TGCTGTGCTG CGCGCTCGTG TTTCTGGACA TCTCCATTAA
        C
GTGGACCACC CAGGAAACGT TTCCTCCAAA GTACCTTCAT TATGACGAAG    100
AAACCTCTCA TCAGCTGTTG TGTGACAAAT GTCCTCCTGG TACCTACCTA
AAACAACACT GTACAGCAAA GTGGAAGACC GTGTGCGCCC CTTGCCCTGA    200
CCACTACTAC ACAGACAGCT GGCACACCAG TGACGAGTGT CTATACTGCA
GCCCCGTGTG CAAGGAGCTG CAGTACGTCA AGCAGGAGTG CAATCGCACC    300
CACAACCGCG TGTGCGAATG CAAGGAAGGG CGCTACCTTG AGATAGAGTT
CTGCTTGAAA CATAGGAGCT GCCCTCCTGG ATTTGGAGTG GTGCAAGCTG    400
GAACCCCAGA GCGAAATACA GTTTGCAAAA GATGTCCAGA TGGGTTCTTC
TCAAATGAGA CGTCATCTAA AGCACCCTGT AGAAAACACA CAAATTGCAG    500
TGTCTTTGGT CTCCTGCTAA CTCAGAAAGG AAATGCAACA CACGACAACA
TATGTTCCGG AAACAGTGAA TCAACTCAAA AATGTGGAAT AGATGTTACC    600
CTGTGTGAGG AGGCATTCTT CAGGTTTGCT GTTCCTACAA AGTTTACGCC
TAACTGGCTT AGTGTCTTGG TAGACAATTT GCCTGGCACC AAAGTAAACG    700
                                                    T
CAGAGAGTGT AGAGAGGATA AAACGGCAAC ACAGCTCACA AGAACAGACT
                    G
TTCCAGCTGC TGAAGTTATG GAAACATCAA AACAAAGACC AAGATATAGT    800
                  G
CAAGAAGATC ATCCAAGATA TTGACCTCTG TGAAAACAGC GTGCAGCGGC
                                            A
ACATTGGACA TGCTAACCTC ACCTTCGAGC AGCTTCGTAG CTTGATGGAA    900
AGCTTACCGG GAAAGAAAGT GGGAGCAGAA GACATTGAAA AAACAATAAA
GGCATGCAAA CCCAGTGACC AGATCCTGAA GCTGCTCAGT TTGTGGCGAA    1000
TAAAAAATGG CGACCAAGAC ACCTTGAAGG GCCTAATGCA CGCACTAAAG
CACTCAAAGA CGTACCACTT TCCCAAAACT GTCACTCAGA GTCTAAAGAA    1100
GACCATCAGG TTCCTTCACA GCTTCACAAT GTACAAATTG TATCAGAAGT
                                                     C
TATTTTTAGA AATGATAGGT AACCAGGTCC AATCAGTAAA AATAAGCTGC    1200
TTATAA                                                    1206
```


FIGURE 2

ISOFORMS OF THE TNFRSF11B PROTEIN

```
MNKLLCCALV FLDISIKWTT QETFPPKYLH YDEETSHQLL CDKCPPGTYL
  N
KQHCTAKWKT VCAPCPDHYY TDSWHTSDEC LYCSPVCKEL QYVKQECNRT      100
HNRVCECKEG RYLEIEFCLK HRSCPPGFGV VQAGTPERNT VCKRCPDGFF
SNETSSKAPC RKHTNCSVFG LLLTQKGNAT HDNICSGNSE STQKCGIDVT      200
LCEEAFFRFA VPTKFTPNWL SVLVDNLPGT KVNAESVERI KRQHSSQEQT
                                         M
FQLLKLWKHQ NKDQDIVKKI IQDIDLCENS VQRHIGHANL TFEQLRSLME      300
                                 M
SLPGKKVGAE DIEKTIKACK PSDQILKLLS LWRIKNGDQD TLKGLMHALK
HSKTYHFPKT VTQSLKKTIR FLHSFTMYKL YQKLFLEMIG NQVQSVKISC      400
L                                                           401
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FIGURE 3

SEQUENCE LISTING

<110> Chew, Anne
Denton, R. Rex
Bieglecki, Karyn M
Nandabalan, Krishnan
Stephens, J. Claiborne

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<130> TNFRSF11B_MWH-0001US (CIP)

<140> TBA
<141> 2002-01-09

<150> PCT/US00/18803
<151> 2000-07-10

<160> 94

<170> PatentIn version 3.1

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Arg Lys His Thr Asn Cys Ser Val Phe Gly Leu Leu Leu Thr Gln Lys
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Gln Lys Cys Gly Ile Asp Val Thr Leu Cys Glu Glu Ala Phe Phe Arg
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